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09/839,041

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Michael D. Nelson

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EXAMINER

SHEIKH, ASFAND M

ART UNIT

PAPER NUMBER

3627

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
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3 MONTHS

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

09/839,041

Applicant(s)

NELSON, MICHAEL D.

Examiner

Asfand M. Sheikh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11-23 and 43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-23 and 43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

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**DETAILED ACTION**

The amendment filed on 11-Jan-2007 has been entered. Claims 11-23 and 43 are pending for examination.

The examiner established new grounds of rejection for claims 11-23 and 43. This action is made non-final.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 11, 22, and 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shyu in view of Henson

As per claim 11, Shyu teaches receiving a plurality of configurations from a plurality of customers by a vendor of the programmable integrated circuits (Shyu, see at least, col. 1, lines 64-67 and col. 2, lines 1-2; the examiner notes that "customer-configured integrated circuit" to be a plurality of

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configurations from a plurality of customers), pulling specified volumes of un-programmed ICs in response to an order from a first customer of the plurality of customers (Shyu, see at least, col. 1, lines 64-67; col. 2, lines 1-2 and lines 40-54; and col. 5, line 58-59; the examiner notes that customers purchase these circuits and they are programmed for the customer), encrypting by the vendor using an encryption system provided by the first customer, one of the plurality of configurations selected by the customer whereby an encrypted configuration is generated (Shyu, see at least, col. 1, lines 64-67 and col. 2, lines 1-2 and lines 40-54; the examiner notes that "proprietary code provider portion adapted to be set by the customer" to be an encryption system provided by the first customer), loading by the vendor, the encrypted configuration into the specified volumes of ICs (Shyu, see at least, col. 1, lines 64-67 and col. 2, lines 1-2 and lines 40-54), loading by the vendor, a decryption program into the specified volumes of ICs wherein the decryption program is provided by the first customer (Shyu, see at least, col. 1, lines 38-51 and lines 64-67; col. 2, lines 1-2 and lines 40-54; and col. 5, lines 14-27).

The examiner notes the Shyu is silent with respect to storing the plurality of configurations, the storing being performed by the vendor, pulling from inventory by the vendor,

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and packing the programmed ICs for shipment from the vendor to the first customer.

Henson teaches receiving and storing the plurality of configurations, the storing being performed by the vendor (Henson, see at least, col. 4, lines 37-52 and col. 5, lines 6-27; Examiner interprets a customized product/order would be stored into the database), pulling from inventory by the vendor (Henson, see at least, col. 4, lines 37-52 and col. 5, lines 6-27; Examiner interprets a customized product/order would need to be pulled from inventory); and packing the shipment from the vendor to the first customer (Henson, see at least, col. 4, lines 37-52 and col. 5, lines 6-27; Examiner interprets a customized product/order would need to be packed for shipment).

***The Examiner notes that teachings of Henson are considered as analogous art for purchasing custom configured products.***

It would have been obvious to one skilled in the art at the time the invention was made to modify the teachings of Shepherd to include receiving a plurality of configurations; storing the plurality of configurations, the storing being performed by the vendor; pulling the specified volumes from inventory by the vendor in response to an order from a first customer of the plurality of customers; and packing the shipment from the vendor to the first customer as taught by Henson. One of ordinary

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skill in the art would have been motivated to combine the teachings in order to provide web-based online store having a user interface for enabling a customer to order a customer configured item (Henson et. al, see at least, col. 2, lines 61-65).

As per claim 22, Shyu teaches wherein the selected configuration is developed by the customer (Shyu, see at least, col. 1, lines 64-67 and col. 2, lines 1-2).

As per claim 43, Shyu teaches for each of the specified volumes of ICs received by the first customer, storing by the first customer, a decryption key in a memory that is coupled to the ICs, wherein the memory and IC reside on a device and the memory is inaccessible for reading external to the device (Shyu, see at least, col. 1, lines 38-51 and lines 64-67; col. 2, lines 1-2 and lines 40-54; and col. 5, lines 14-27); and for each of the specified volumes of the ICs received by the first customer, executing the decryption program, wherein the decryption program reads the key, decryption the encrypted configuration data into the decrypted configuration data, and initializes the IC with the decrypted configuration data (Shyu, see at least, col. 1,

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lines 38-51 and lines 64-67; col. 2, lines 1-2 and lines 40-54; and col. 5, lines 14-27).

3. Claims 12-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shyu in view of Henson as applied to claim 11 above, and further in view of Clinton et al.

As per claim 12, the examiner notes that the combination of Shyu and Henson is silent with respect to attaching a memory device to the FPGAs; and programming the FPGAs using the selected configuration stored in the memory device.

Clinton et al. discloses attaching a memory device to the FPGAs (Clinton et al., see at least, col. 1, lines 47-64; the examiner interprets configuration data is transferred from an external memory device to be attaching a memory device to the FPGA); and programming the FPGAs using the selected configuration stored in the memory device (Clinton et al., see at least, col. 1, lines 47-64).

It would have been obvious to one skilled in the art at the time the invention was made to modify the combination of Shyu and Henson to include attaching a memory device to the FPGAs; and programming the FPGAs using the selected configuration stored in the memory device as taught by Clinton et al. One of

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ordinary skill in the art would have been motivated to combine the teachings in order to provide an integrated circuit including an FPGA with a programmable memory array, which allows for implementing various configurations (Clinton et al, see at least, col. 1, lines 65-67 and col. 2, lines 1-2).

As per claim 13 and 14, the examiner notes that the combination of Shyu and Henson is silent with respect to programming the memory device while it is connected to the FPGA; and powering up the FPGA and the memory device in order that the memory device configures the FPGA.

Clinton et al. discloses programming the memory device while it is connected to the FPGA (Clinton et al., see at least, col. 18, lines 33-54; the examiner notes "enable programming data access regions... transferring configuration data into configuration memory of the FPGA" to be programming the memory device while it is connected to the FPGA); and powering up the FPGA and the memory device in order that the memory device configures the FPGA (Clinton et al., see at least, col. 1, lines 47-64 and col. 33, lines 19; the examiner notes electrically programmable and DC inputs to be using power in order that the memory device configures the FPGA).



It would have been obvious to one skilled in the art at the time the invention was made to modify the combination of Shyu and Henson to include programming the memory device while it is connected to the FPGA; and powering up the FPGA and the memory device in order that the memory device configures the FPGA as taught by Clinton et al. The motivation to combine is the same as claim 13, above.

As per claim 15-17, the examiner notes that the combination of Shyu and Henson is silent with respect to wherein the memory device is selected from a group consisting of a programming read only memory (PROM), NAND flash, NOR flash, erasable PROM, and electrically erasable PROM.

Clinton et al. teaches wherein the memory device is selected from a group consisting of a programming read only memory (PROM), NAND flash, NOR flash, erasable PROM, and electrically erasable PROM (Clinton et al., see at least, col. 5, lines 1-47).

It would have been obvious to one skilled in the art at the time the invention was made to modify the combination of Shyu and Henson to include wherein the memory device is selected from a group consisting of a programming read only memory (PROM), NAND flash, NOR flash, erasable PROM, and electrically erasable

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PROM as taught by Clinton et al. The motivation to combine is the same as claim 13, above.

As per claim 18, the examiner notes that the combination of Shyu and Henson is silent with respect to wherein the memory device is an anti-fuse.

Clinton et al. teaches wherein the memory device is anti-fuse (Clinton et al., see at least, col. 1, lines 47-64).

It would have been obvious to one skilled in the art at the time the invention was made to modify the combination of Shyu and Henson to include wherein the memory device is an anti-fuse as taught by Clinton. The motivation to combine is the same as claim 13, above

4. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shyu in view of Henson as applied to claim 11 above, and further in view of Giddings et al.

As per claim 19, the examiner notes that the combination of Shyu and Henson is silent with respect to further comprising testing the programmed ICs.

Giddings et al. teaches further comprising testing the programmed ICs (Goldings et al, see at least, abstract).

It would have been obvious to one skilled in the art at the time the invention was made to modify the combination of Shyu and Henson to include further comprising testing the programmed ICs as taught by Giddings et al. One of ordinary skill in the art would have been motivated to combine the teachings in order to verify that an item was in working order before packing the item for shipment to a customer.

5. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shyu in view of Henson as applied to claim 11 above, and further in view of Park et al.

As per claim 20, the examiner notes that the combination of Shyu and Henson is silent with respect to further comprising the step of labeling the programmed ICs to reflect the selected configuration.

Park et al. teaches further comprising the step of labeling the programmed ICs to reflect the selected configuration (Park et al., see at least, col. 1, lines 14-19).

It would have been obvious to one skilled in the art at the time the invention was made to modify the combination of Shyu and Henson to include further comprising the step of labeling the programmed ICs to reflect the selected configuration as

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taught by Park et al. One of ordinary skill in the art would have been motivated to combine the teachings in order to properly identify the functions of the integrated circuit.

6. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shyu in view of Henson and Park et al. as applied to 20 above, and further in view of Asar.

As per claim 23, the examiner notes that the combination of Shyu, Henson and Park et al. is silent with respect to wherein the step of labeling comprises parking the customers programmed ICs with at least one of a customer name and a customer logo.

Asar discloses wherein the step of labeling comprises parking the customers programmed ICs with at least one of a customer name and a customer logo (Asar, see at least, col. 4, lines 66-67).

It would have been obvious to one skilled in the art at the time the invention was made to modify the combination of Shyu, Henson, and Park et al. to include wherein the step of labeling comprises parking the customers programmed ICs with at least one of a customer name and a customer logo as taught by Asar. One of ordinary skill in the art would have been motivated to combine the teachings in order to properly identify the owner or company of the integrated circuit.

***Response to Arguments***

7. Applicant's arguments, see Remarks, filed 11-Jan-2007, with respect to the rejection(s) of claim(s) 11-23 and 43 under U.S.C. § 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Shyu in view of Henson.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Field Programmable Gate Array with Program Encryption [WO 01/08411].

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Asfand M. Sheikh whose telephone number is (571) 272-1466. The examiner can normally be reached on M-F 8a-4:30p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ryan M. Zeender can be reached on (571) 272-6790. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Asfand M Sheikh  
Examiner  
Art Unit 3627

ams  
30-Mar-07

*Michael Cuff* 3/30/07  
**MICHAEL CUFF**  
**PRIMARY EXAMINER**